Holiday e-mails can carry a danger

Experts are warning about viruses in infected attachments

BY DAVID L. WILSON
Mercury News Washington Bureau

WASHINGTON — The holiday season is often a time when computer users pass around amusing electronic animations via e-mail. Although most of these attachments are harmless, some may hide destructive computer viruses.

Indeed, anti-virus watchdogs identified a new virus this week that masquerades as an innocuous bunch of digital photos but actually plants a time bomb that will erase the computer's hard drive on Jan. 1, 2000.

Because that's the same date that the Y2K bug is expected to cause many computer systems to crash, the virus might fool users into believing they have a Y2K problem.

Virus fighters expect more viruses linked to Y2K to emerge as Jan. 1 approaches.

Virus fighters expect more viruses linked to Y2K to emerge as Jan. 1 approaches, and they are once again begging computer users to avoid opening e-mailed attachments.

"We're telling people to be very wary of electronic Christmas cards," said Sal Viveros, a virus expert with Network Associates Inc., based in Santa Clara.

The Mypics worm, as this latest threat is called, arrives attached to what appears to be e-mail from a friend or associate that says, "Here's some pictures for you!"

Opening the attached file, Pics4You.exe, will infect your computer with the virus, which will at-

*See **VIRUSES**, Page 3C*

DRAWING 1, PAGE 1

Holiday e-mails carry risk

VIRUSES

from Page 1C

tempt to mail itself to 50 people it finds in your Microsoft Outlook e-mail address book. It will also change the home page of your Microsoft Internet Explorer Web browser to a pornographic site.

The real damage occurs Jan. 1, when the virus will change the computer's most basic software and attempt to erase the hard drive.

The increasing frequency of alerts relating to things like electronic viruses is prompting renewed calls for safe computing, but few experts expect users to change their habits.

"It would be great if everybody followed the rule: Never open e-mail attachments if you can help it," said Carey Nachenberg, chief researcher at Symantec's anti-viral research center. "But I don't think they will."

In general, just looking at an infected e-mail can't hurt; users have to do something else to activate the virus and infect their system. Typically, a virus comes as an attachment to e-mail, such as a document that can be read only with a word processor like Microsoft Word.

Clicking on the attachment to read the document can infect the user's machine with any virus that was lurking on the sender's machine. A virus is dangerous because it can alter or destroy data.

Until recently, experts advised users to simply avoid opening attachments sent by people they didn't know. Unfortunately, the most troublesome viruses today spread by fooling people into believing the document was sent by a friend.

For instance, Mypics attempts to mail copies of itself to anyone in the user's e-mail address book. Anyone receiving such a missive from, say, their brother, might open that attachment without thinking about it.

Most software vendors are aware of the problem and take steps to get around it. For instance, Blue Mountain Arts, a purveyor of electronic greeting cards, doesn't send the card via e-mail, just a Web address, which can be accessed though any browser.

Jared P. Schutz, the company's executive director, said that's the only way to be safe. "I would highly recommend that people avoid opening attached files, even from people that they know," he said.

That's the standard advice, but nobody expects attachments to disappear tomorrow, despite the warnings.

"I can't tell you whether we've still got a lot of people who just haven't gotten the message — newbies — or whether it's people who should know better but do it anyway," said Sandra Sparks, director of the Energy Department's Computer Incident Advisory Capability, which works to ensure the security of government computer systems. "Maybe it's the same kind of thing that happens with people who don't wear a seat belt."

Although many corporations scan all incoming e-mail and destroy any known virus before it's delivered into an employee's mailbox, very few Internet service providers offer such a feature, largely because examining every single data packet that flows into the pipes can slow service.

So for now, anti-virus protection is largely the responsibility of individuals.

To protect against all viruses, experts say virus protection software should be updated weekly.

Attachments generally should be avoided. If you receive an attachment that you want, contact the sender and ask if it was deliberately sent. If possible, ask that the information in the attachment be copied and pasted into a plain e-mail file and resent, or posted on a Web page.

If that's not possible and you must open the attachment, make sure it's scanned first with an updated anti-viral program.

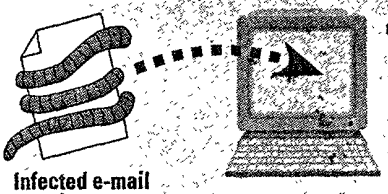
Even with such precautions, it's still possible for a new, fast-moving virus to get through your defenses. The only real protection users have is to regularly make copies of the data on their hard drive.

"Back up your critical stuff at least once a week," said Sparks. "I know that's annoying, and I know it takes time. But compare that amount of time vs. the amount of time you'd spend trying to rebuild your system, or your company, and that's a very small investment."

Contact David Wilson at (202) 383-6020 or at dwilson@sjmercury.com.

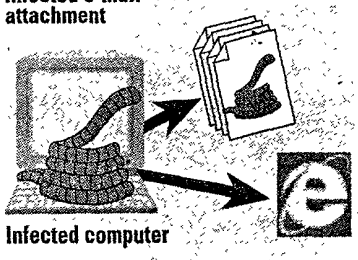
A computer virus for Christmas

Many computer viruses travel as innocent-looking files attached to electronic mail. With the holiday season upon us, people often e-mail electronic greetings and photographs to friends and family members, but not every file that comes with an e-mail is safe. This year poses special hazards, according to anti-virus experts, because many virus writers may use the Y2K bug to hide their mischief. This week, anti-virus companies detected a new virus, named Mypics, that could erase a computer's hard drive on Jan. 1.



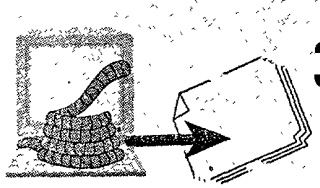
Infected e-mail attachment

1 WORM ARRIVES
You get an e-mail with an attachment named Pics4You.exe saying, *"Here's some pictures for you!"*



Infected computer

2 WORM REPRODUCES
If you open the attachment, the worm will send itself to 50 people in your Microsoft Outlook address book. It also changes the home page of your Microsoft Internet Explorer browser to a pornographic site.



3 WORM WAITS
On Jan. 1, 2000, the worm will overwrite key system data. The user will see an apparent Y2K-related error when starting up the computer. The worm will then destroy all data on the hard drive.

HOW TO PROTECT YOURSELF

Avoid opening attachments to e-mail if possible. If you want the attachment, call the sender and verify its contents before opening it. Update virus protection software weekly and use it to scan attachments. Back up critical data regularly.

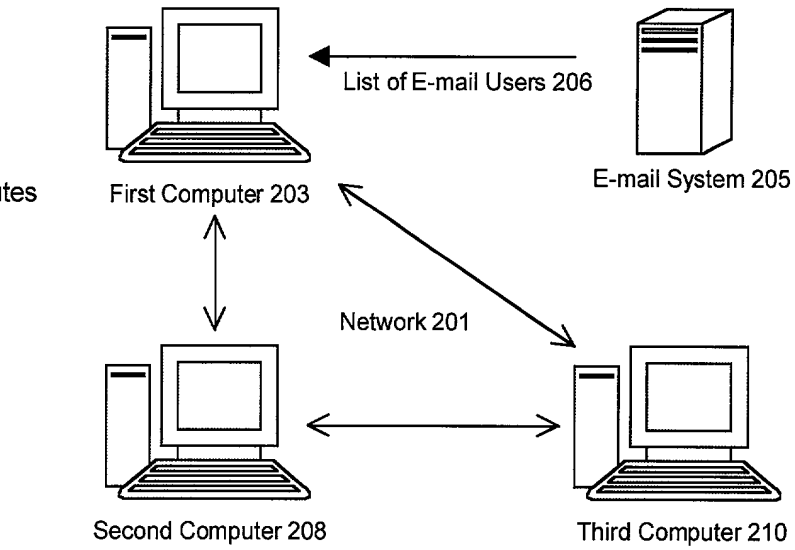
Source: Symantec Corp.

MERCURY NEWS

Drawing 2

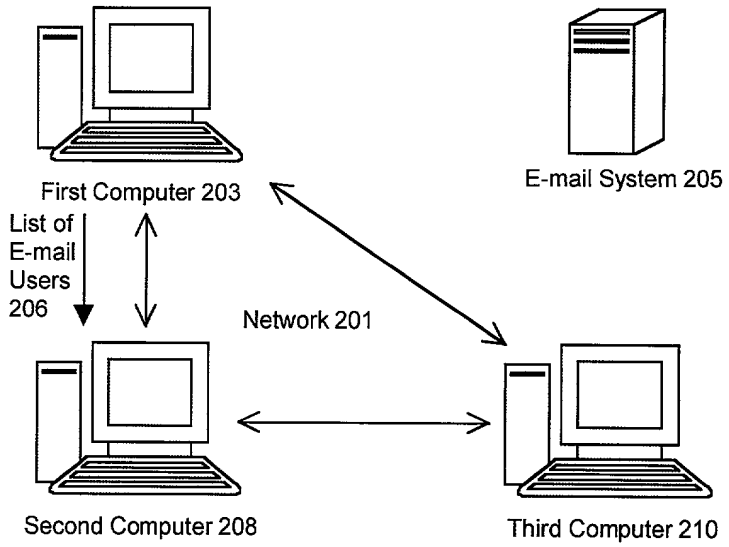
Step 1:

A first computer 203 loads and executes the first program which extracts a set of e-mail addresses from the e-mail system 205 thereby creating a list of e-mail users 206.



Step 2:

The first computer 203 loads and executes the second program that sends the list of e-mail users 206 to a second computer 208.



Drawing 2

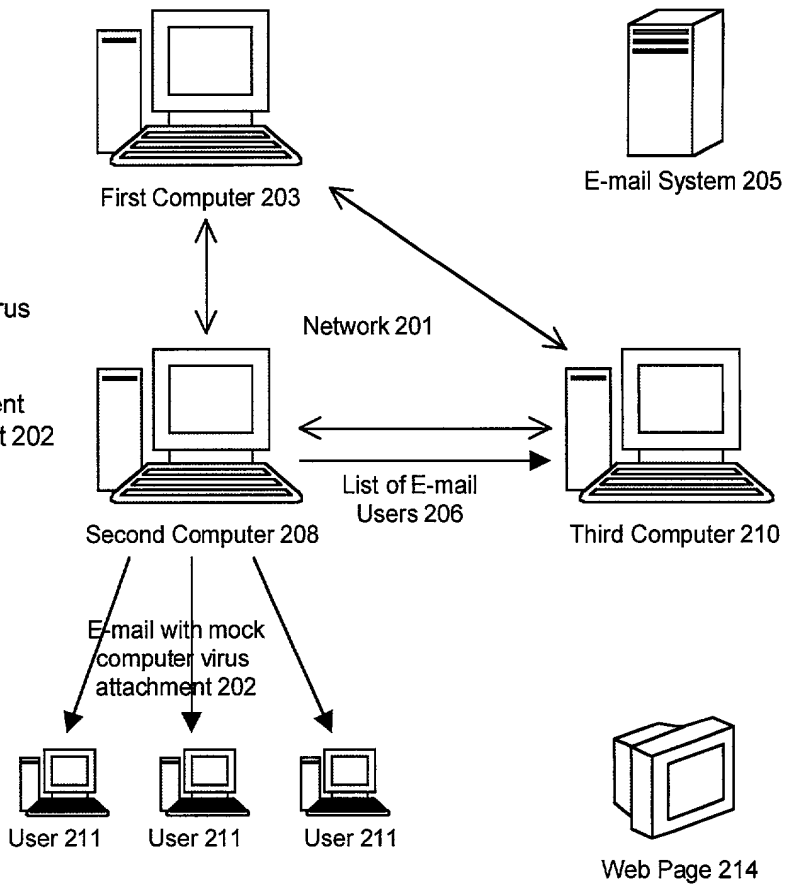
Step 3:

The second computer 208 loads and executes the third program that:

specifies within the mock computer virus attachment 202 the e-mail address of the third computer 210 as the recipient of the e-mail that is sent if the mock computer virus attachment 202 is opened.

sends the list of e-mail users 206 to the third computer 210.

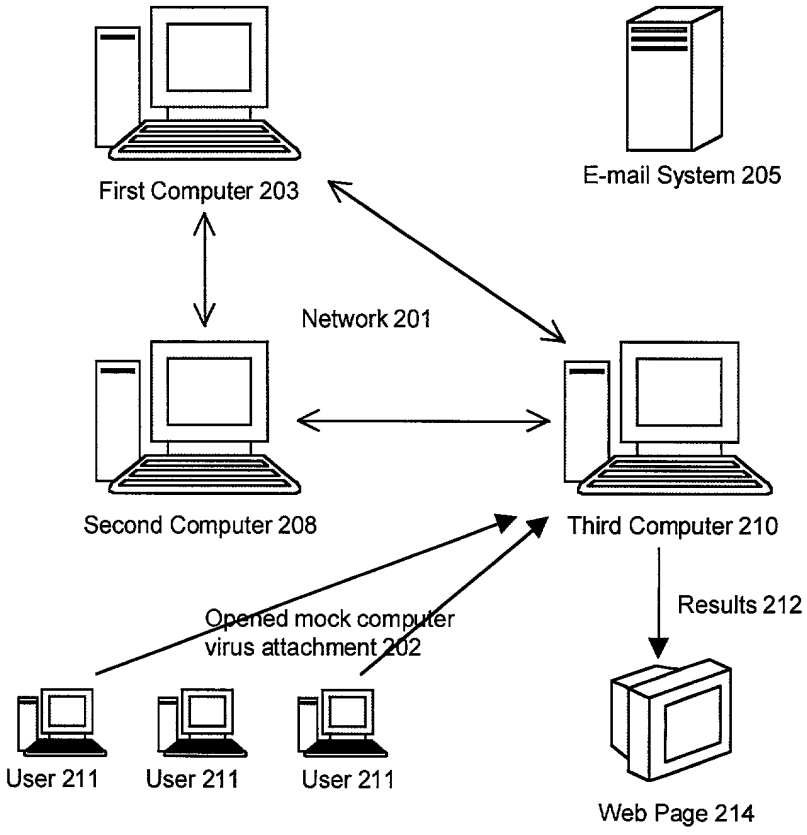
and sends an e-mail with the mock computer virus attachment 202 to each e-mail address on the list i.e. each user 211.



Step 4:

The third computer 210 loads and executes the fourth program which receives the e-mails from the users 211 that open the mock computer virus attachment 202 and creates a new list of e-mail users with their respective e-mail addresses.

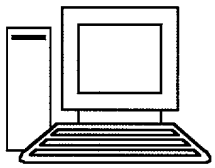
The new list of e-mail users that opened the mock computer virus attachment 202 and those that did not open it, may be displayed as results 212 on a web page 214 or other report on the network.



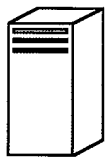
Drawing 3

Step 1:

An e-mail user behavior modification server 301 provides a program 302 that can be downloaded to a computer 303.

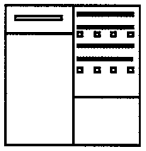


Computer 303



E-mail System 305

Program 302



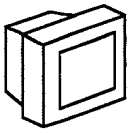
E-mail User Behavior Modification Server 301

Administrator / Management 310

User 307

User 307

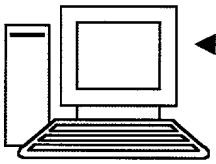
User 307



Web Page 309

Step 2:

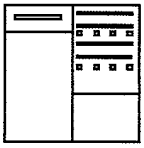
The program 302 extracts a list of e-mail addresses 304 from the e-mail system 305.



Computer 303

List of E-mail Addresses 304

E-mail System 305



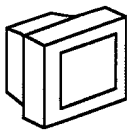
E-mail User Behavior Modification Server 301

Administrator / Management 310

User 307

User 307

User 307

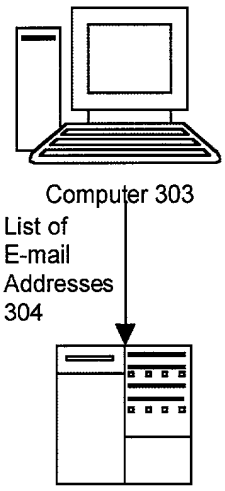


Web Page 309

Drawing 3

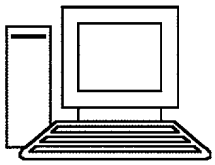
Step 3:

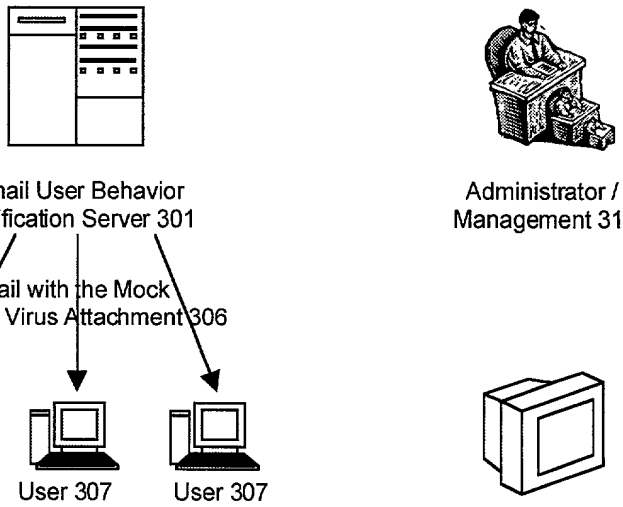
The program 302 sends the list of e-mail addresses 304 from the computer 303 to the e-mail user behavior modification server 301.



Step 4:

The e-mail user behavior modification server 301 sends an e-mail with the mock computer virus attachment 306 to each e-mail address on the list i.e. each user 307.



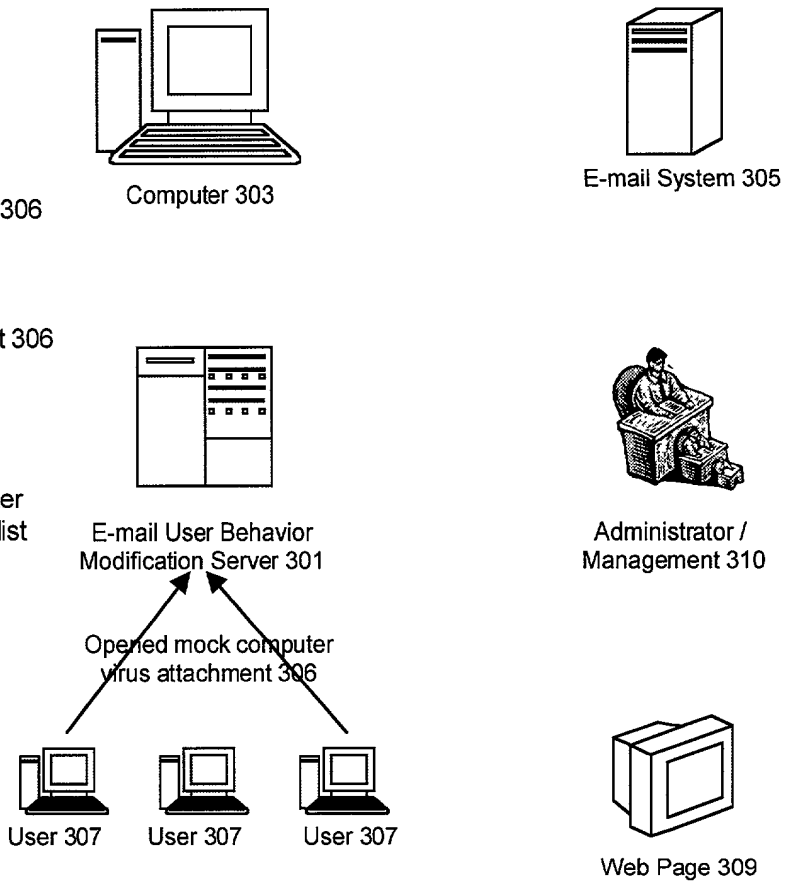


Drawing 3

Step 5:

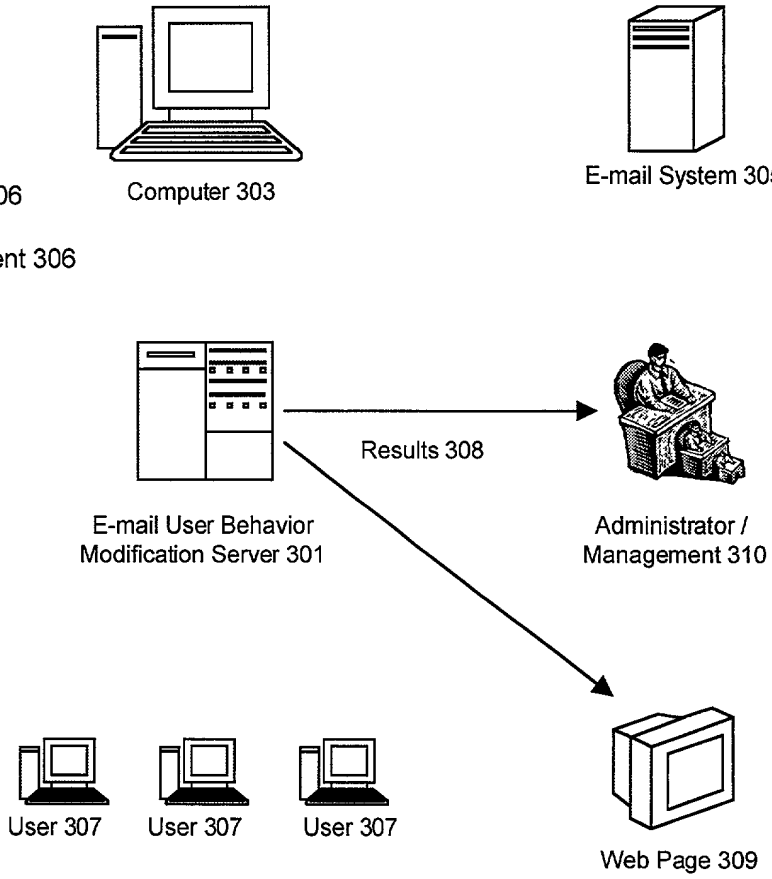
The mock computer virus attachment 306 will send an e-mail to the e-mail address of the e-mail user behavior modification server 301 if the mock computer virus attachment 306 is opened.

The e-mail user behavior modification server 301 receives the e-mails from users 307 that open the mock computer virus attachment 306 and compiles a list of users 308 that opened the mock computer virus attachment 306.



Step 6:

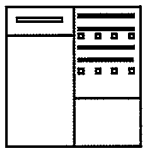
The list of users that opened the mock computer virus attachment 306 and the users that were sent the e-mail with the mock computer virus attachment 306 but did not open it are displayed as results 308 on a web page 309 or sent as an e-mail to the administrator / management 310.



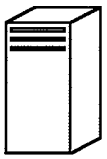
Drawing 4

Step 1:

An e-mail user behavior modification server 401 provides a program 402 that can be downloaded to a computer 403.

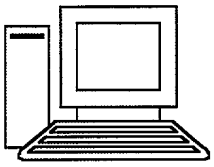


E-mail User Behavior Modification Server 401



E-mail System 405

Program 402



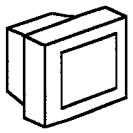
Computer 403

Administrator / Management 410

User 407

User 407

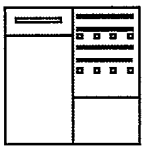
User 407



Web Page 409

Step 2:

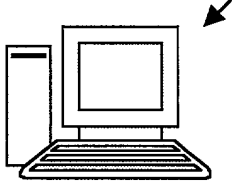
The program 402 extracts a list of e-mail addresses 404 from the e-mail system 405.



E-mail User Behavior Modification Server 401

E-mail System 405

List of E-mail Addresses 404



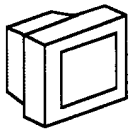
Computer 403

Administrator / Management 410

User 407

User 407

User 407

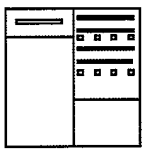


Web Page 409

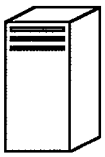
Drawing 4

Step 3:

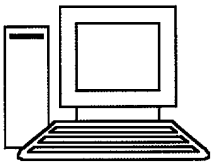
The computer 403 sends an e-mail with the mock computer virus attachment 406 to each e-mail address on the list i.e. each user 407.



E-mail User Behavior Modification Server 401



E-mail System 405



Computer 403

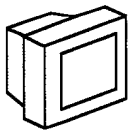
Administrator / Management 410

E-mail with the Mock Computer Virus Attachment 406

User 407

User 407

User 407

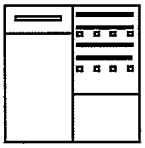


Web Page 409

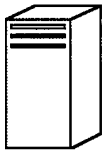
Step 4:

The mock computer virus attachment 406 will send an e-mail to the e-mail address of the e-mail user behavior modification server 401 if the mock computer virus attachment 406 is opened.

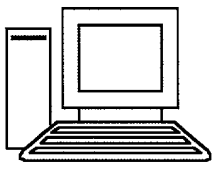
The e-mail user behavior modification server 401 receives the e-mails from users 407 that open the mock computer virus attachment 406 and compiles a list of users that opened the mock computer virus attachment 406.



E-mail User Behavior Modification Server 401



E-mail System 405



Computer 403

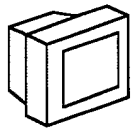
Administrator / Management 410

Opened mock computer virus attachment 406

User 407

User 407

User 407

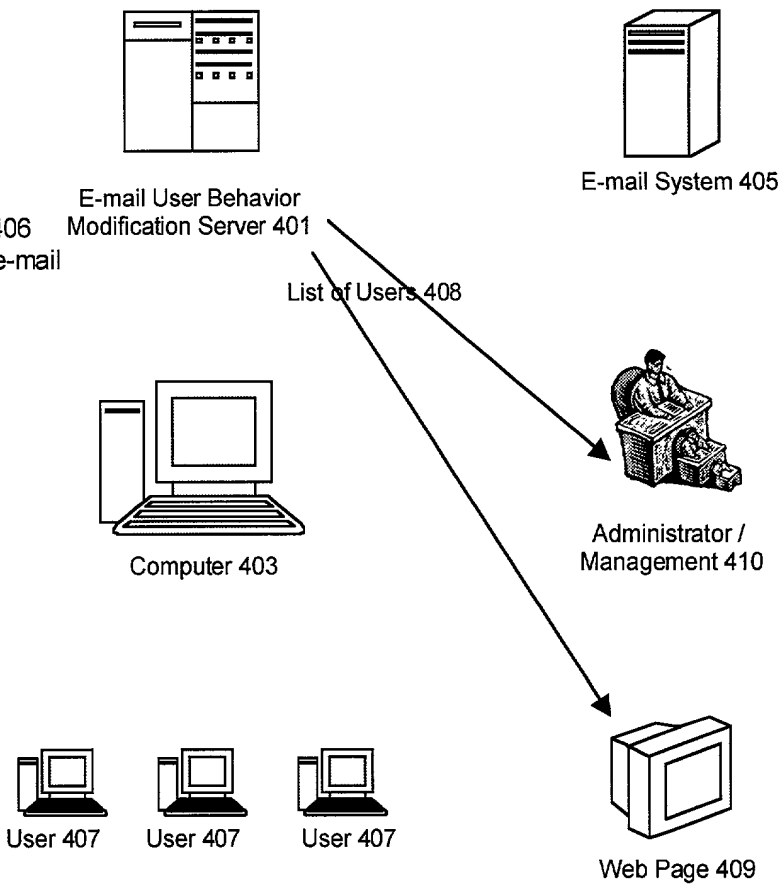


Web Page 409

Drawing 4

Step 5:

The list of users that opened the mock computer virus attachment 406 and the users 407 that were sent the e-mail with the mock computer virus attachment 406 but did not open it are displayed as results 408 on a web page 409 or sent as an e-mail to the administrator / management 410.

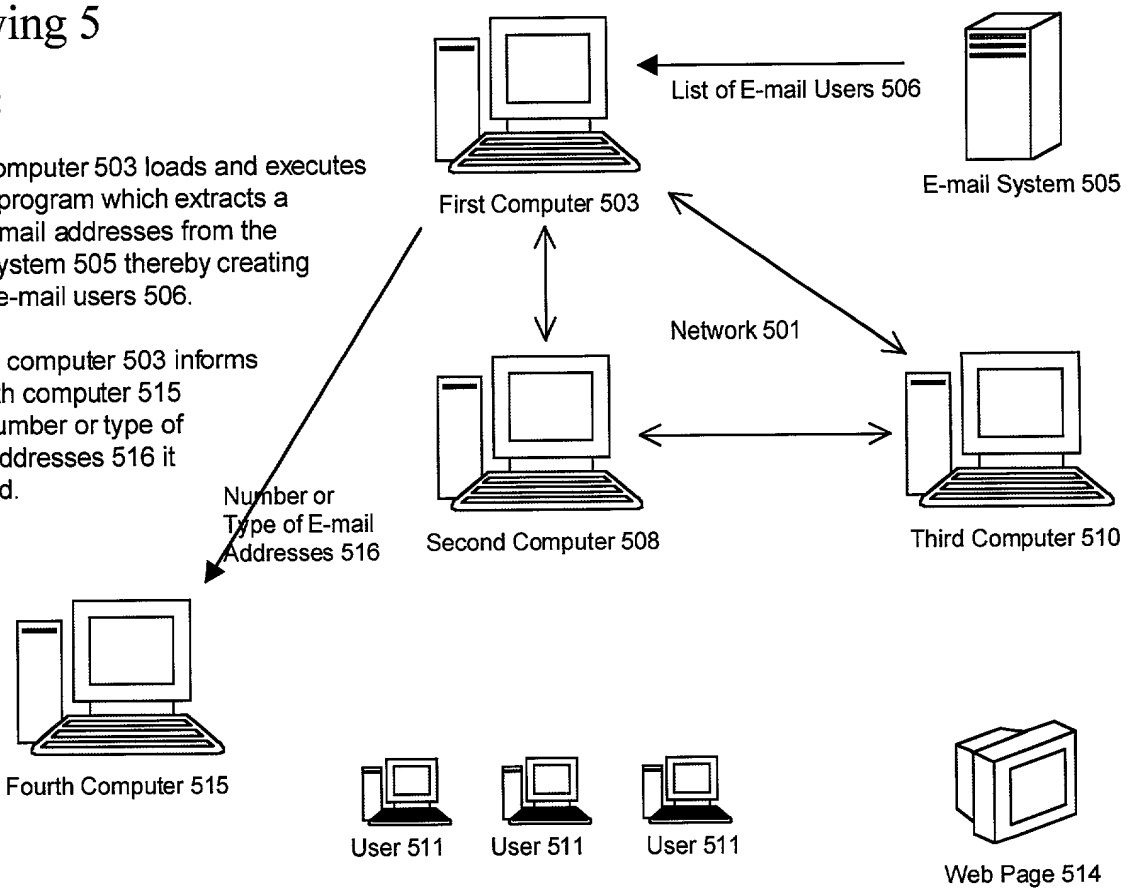


Drawing 5

Step 1:

A first computer 503 loads and executes the first program which extracts a set of e-mail addresses from the e-mail system 505 thereby creating a list of e-mail users 506.

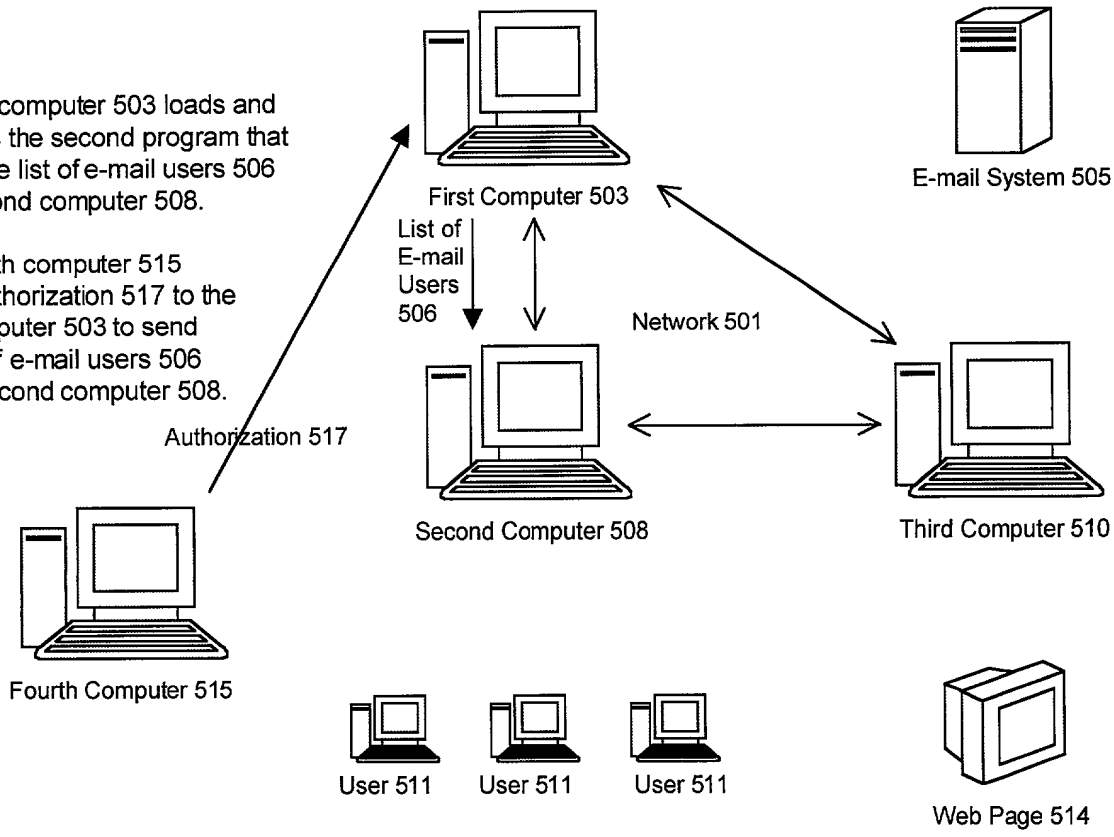
The first computer 503 informs the fourth computer 515 of the number or type of e-mail addresses 516 it extracted.



Step 2:

The first computer 503 loads and executes the second program that sends the list of e-mail users 506 to a second computer 508.

The fourth computer 515 gives authorization 517 to the first computer 503 to send the list of e-mail users 506 to the second computer 508.

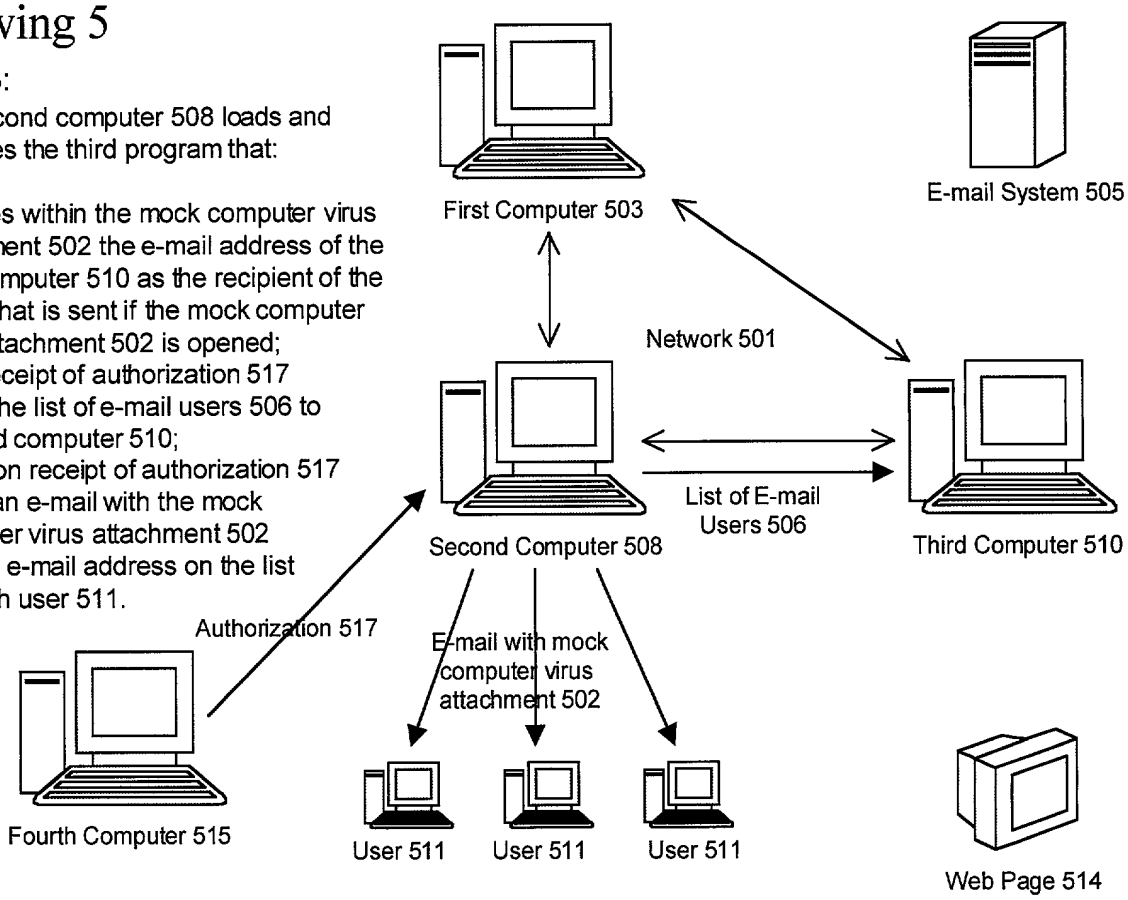


Drawing 5

Step 3:

The second computer 508 loads and executes the third program that:

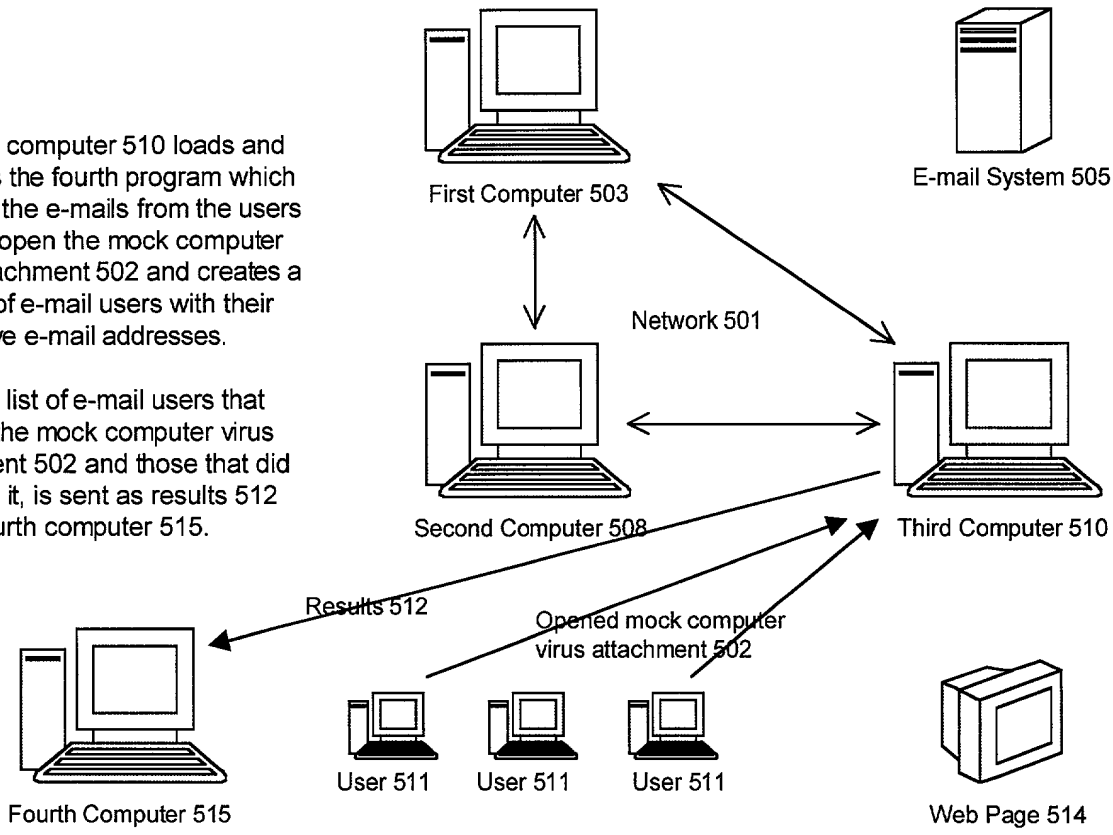
specifies within the mock computer virus attachment 502 the e-mail address of the third computer 510 as the recipient of the e-mail that is sent if the mock computer virus attachment 502 is opened;
upon receipt of authorization 517 sends the list of e-mail users 506 to the third computer 510;
and upon receipt of authorization 517 sends an e-mail with the mock computer virus attachment 502 to each e-mail address on the list i.e. each user 511.



Step 4:

The third computer 510 loads and executes the fourth program which receives the e-mails from the users 511 that open the mock computer virus attachment 502 and creates a new list of e-mail users with their respective e-mail addresses.

The new list of e-mail users that opened the mock computer virus attachment 502 and those that did not open it, is sent as results 512 to the fourth computer 515.



Drawing 5

Step 5:

The fourth computer 515 gives authorization 517 to the third computer 510 to post the results 512 to the web page 514.